

Chemical Analysis Report

SE-DIST-2021-05-21-02

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

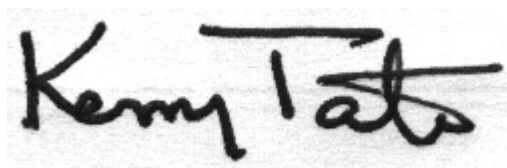
Event Description: **SMP - 3205B pickup**
Request ID: **RQ-2021-05-10-56**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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2199 South Rock Road
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 09-JUN-2021 09:26

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first few letters of the last name.

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Taylor Creek @ 70

Collection Date/Time: 05/20/2021 09:45

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249268	EPA 180.1 Rev. 2.0	Turbidity	27		NTU	P398601	
	EPA 300.0 Rev. 2.1	Chloride	78		mg Cl/L	P399193	
		Sulfate	35		mg SO4/L	P399195	
	SM 2120 B-2011	Color (true)	80		PCU	P398621	
	SM 2320 B-2011	Total Alkalinity	190		mg CaCO3/L	P398904	
	SM 2540 C-2011	TDS	433		mg/L	P399052	
	SM 2540 D-2011	TSS	121		mg/L	P398842	
	SM 4500 F-C-2011	Fluoride	0.15		mg F/L	P398906	
2249269	EPA 350.1 Rev. 2.0	Ammonia-N	0.86		mg N/L	P399061	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	6.8		mg N/L	P399150	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P398655	
	EPA 365.1 Rev. 2.0	Total-P	1.7		mg P/L	P398798	
	SM 5310 B-2011	Organic Carbon	27		mg C/L	P398925	
2249270	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.42		mg P/L	P398701	
2249274	EPA 8270E	Aldrin	0.72	U	ng/L	P398688	
		Alpha-BHC	0.11	U	ng/L	P398688	
		Alpha-Chlordane	0.22	U	ng/L	P398688	
		Beta-BHC	0.11	UJ	ng/L	P398688	LCS
		Beta-Cyfluthrin**	1.4	U	ng/L	P398688	
		Bifenthrin**	36		ng/L	P398688	
		Carbophenothion	0.39	UJ	ng/L	P398688	LCS
		Chlorothalonil	0.55	U	ng/L	P398688	
		Cis-Nonachlor**	0.22	U	ng/L	P398688	
		Cypermethrin	1.7	UJ	ng/L	P398688	LCS
		Dacthal**	0.17	U	ng/L	P398688	
		DDD-p,p'	0.28	U	ng/L	P398688	
		DDE-p,p'	0.22	U	ng/L	P398688	
		DDT-p,p'	0.58	I	ng/L	P398688	
		Delta-BHC	0.44	UJ	ng/L	P398688	LCS
		Deltamethrin**	1.4	UJ	ng/L	P398688	LCS
		Dichlobenil**	0.11	UJ	ng/L	P398688	LCS
		Dicofol	1.4	UJ	ng/L	P398688	LCS
		Dieldrin	0.44	U	ng/L	P398688	
		Endosulfan I	0.44	U	ng/L	P398688	
		Endosulfan II	0.44	U	ng/L	P398688	
		Endosulfan Sulfate	0.33	U	ng/L	P398688	
		Endrin	0.44	U	ng/L	P398688	
		Endrin Aldehyde	0.83	U	ng/L	P398688	
		Endrin Ketone	0.44	U	ng/L	P398688	
		Esfenvalerate**	0.83	UJ	ng/L	P398688	LCS
		Ethalfuralin**	0.17	U	ng/L	P398688	
		Fenpropathrin**	0.28	UJ	ng/L	P398688	LCS
		Gamma-BHC	0.14	U	ng/L	P398688	

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249274	EPA 8270E	Gamma-Chlordane	0.22	U	ng/L	P398688	
		Heptachlor	0.22	U	ng/L	P398688	
		Heptachlor Epoxide	0.28	U	ng/L	P398688	
		Hexachlorobenzene	1.1	U	ng/L	P398688	
		Kepone**	5.5	U	ng/L	P398688	
		Lambda-Cyhalothrin**	1.1	IJ	ng/L	P398688	LCS
		Methoxychlor	0.33	U	ng/L	P398688	
		MGK-264**	0.22	U	ng/L	P398688	
		Mirex	0.33	U	ng/L	P398688	
		Permethrin	1.8	U	ng/L	P398688	
		Phenothrin**	1.0	U	ng/L	P398688	
		Piperonyl Butoxide**	0.17	UJ	ng/L	P398688	LCS
		Prallethrin**	2.2	UJ	ng/L	P398688	LCS
		Tau-Fluvalinate**	0.28	UJ	ng/L	P398688	LCS
		Tetramethrin**	0.83	UJ	ng/L	P398688	LCS
		Trans-Nonachlor**	0.22	U	ng/L	P398688	
		Triclosan Methyl**	0.17	U	ng/L	P398688	
		Trifluralin	0.22	U	ng/L	P398688	
	EPA 8276	Chlordane	5.5	U	ng/L	P398688	
		Toxaphene	33	U	ng/L	P398688	
2249284	EPA 8321B	2,4-D	0.090		ug/L	P398662	
		Acesulfame K	0.14	I	ug/L	P398627	
		2,4,5-T	0.0040	U	ug/L	P398662	
		AMPA	1.6		ug/L	P398627	
		Sucralose	0.35		ug/L	P398627	
		Acetaminophen	0.0080	U	ug/L	P398662	RPD
		Acetamiprid	0.0020	U	ug/L	P398662	
		Endothall	0.25	U	ug/L	P398627	
		Glufosinate	0.10	U	ug/L	P398627	
		Glyphosate	17		ug/L	P398627	
		Afidopyropen	0.0020	U	ug/L	P398662	
		Bentazon	0.0022	I	ug/L	P398662	
		Benzovindiflupyr	0.0020	U	ug/L	P398662	
		Carbamazepine	8.0E-04	U	ug/L	P398662	
		Clothianidin	0.0020	U	ug/L	P398662	
		Dinotefuran	0.0080		ug/L	P398662	
		Diuron	0.0020	U	ug/L	P398662	
		Fenuron	0.016	U	ug/L	P398662	
		Fluridone	8.0E-04	U	ug/L	P398662	
		Imazapyr	0.46		ug/L	P398662	
		Hydrocodone	0.0020	U	ug/L	P398662	
		Ibuprofen	0.020	U	ug/L	P398662	
		Imidacloprid	0.014		ug/L	P398662	
		Linuron	0.0040	U	ug/L	P398662	
		Mandestrobin	0.0020	U	ug/L	P398662	

Field ID: G1SE0011

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2249284	EPA 8321B	MCP	0.0020	U	ug/L	P398662	
		Naproxen	0.0080	U	ug/L	P398662	
		Primidone	0.0040	U	ug/L	P398662	
		Pyraclostrobin	0.0020	U	ug/L	P398662	
		Thiamethoxam	0.0020	U	ug/L	P398662	
		Tolfenpyrad	0.0020	U	ug/L	P398662	
		Triclopyr	0.0040	U	ug/L	P398662	

Ref. Method and Comment:
EPA 8270E: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P398601

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399193

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399195

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399061

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398655

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398798

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398701

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8270E
Batch ID: P398688

Component	Result	Code	Units
Aldrin	0.65	U	ng/L
Alpha-BHC	0.10	U	ng/L
Alpha-Chlordane	0.20	U	ng/L
Beta-BHC	0.10	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8270E
Batch ID: P398688

Component	Result	Code	Units
Beta-Cyfluthrin	1.2	U	ng/L
Bifenthrin	0.50	U	ng/L
Carbophenothion	0.35	U	ng/L
Chlorothalonil	0.50	U	ng/L
Cis-Nonachlor	0.20	U	ng/L
Cypermethrin	1.5	U	ng/L
Dacthal	0.15	U	ng/L
DDD-p,p'	0.25	U	ng/L
DDE-p,p'	0.20	U	ng/L
DDT-p,p'	0.25	U	ng/L
Delta-BHC	0.40	U	ng/L
Deltamethrin	1.2	U	ng/L
Dichlobenil	0.10	U	ng/L
Dicofol	1.2	U	ng/L
Dieldrin	0.40	U	ng/L
Endosulfan I	0.40	U	ng/L
Endosulfan II	0.40	U	ng/L
Endosulfan Sulfate	0.30	U	ng/L
Endrin	0.40	U	ng/L
Endrin Aldehyde	0.75	U	ng/L
Endrin Ketone	0.40	U	ng/L
Esfenvalerate	0.75	U	ng/L
Ethalfuralin	0.15	U	ng/L
Fenpropathrin	0.25	U	ng/L
Gamma-BHC	0.12	U	ng/L
Gamma-Chlordane	0.20	U	ng/L
Heptachlor	0.20	U	ng/L
Heptachlor Epoxide	0.25	U	ng/L
Hexachlorobenzene	1.0	U	ng/L
Kepone	5.0	U	ng/L
Lambda-Cyhalothrin	0.75	U	ng/L
Methoxychlor	0.30	U	ng/L
MGK-264	0.20	U	ng/L
Mirex	0.30	U	ng/L
Permethrin	1.6	U	ng/L
Phenothrin	0.90	U	ng/L
Piperonyl Butoxide	0.15	U	ng/L
Prallethrin	2.0	U	ng/L
Tau-Fluvalinate	0.25	U	ng/L
Tetramethrin	0.75	U	ng/L
Trans-Nonachlor	0.20	U	ng/L
Triclosan Methyl	0.15	U	ng/L
Trifluralin	0.20	U	ng/L

Reference Method: EPA 8276
Batch ID: P398688

Component	Result	Code	Units
Chlordane	5.0	U	ng/L
Toxaphene	30	U	ng/L

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P398627

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P398662

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2120 B-2011
Batch ID: P398621

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P398904

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2011
Batch ID: P399052

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P398842

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P398906

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P398925

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399193

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399195

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399061

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	103		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398655

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398798

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	104		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398701

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.8		P	90 - 110

Reference Method: EPA 8270E
Batch ID: P398688

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aldrin	39.2	42.8	P/P	20 - 150
Alpha-BHC	88.2	90.2	P/P	50 - 150
Alpha-Chlordane	70.0	74.0	P/P	50 - 150
Beta-BHC	32.7	36.0	F/F	50 - 150
Beta-Cyfluthrin	51.0	50.5	P/P	50 - 150
Bifenthrin	49.9	47.0	P/P	40 - 150
Carbophenothion	17.7	16.2	F/F	20 - 150
Chlorothalonil	109	130	P/P	20 - 150
Cis-Nonachlor	65.1	71.1	P/P	50 - 150
Cypermethrin	42.9	40.4	F/F	50 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270E
Batch ID: P398688

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Dacthal	73.1	71.8	P/P	50 - 150
DDD-p,p'	58.1	58.7	P/P	50 - 150
DDE-p,p'	65.2	64.2	P/P	50 - 150
DDT-p,p'	80.7	82.1	P/P	50 - 150
Delta-BHC	48.9	53.6	F/P	50 - 150
Deltamethrin	40.9	36.3	F/F	50 - 150
Dichlobenil	30.6	34.2	F/F	40 - 150
Dicofol	49.1	45.6	F/F	50 - 150
Dieldrin	62.8	65.5	P/P	50 - 150
Endosulfan I	76.6	81.0	P/P	50 - 150
Endosulfan II	95.2	108	P/P	50 - 150
Endosulfan Sulfate	61.4	57.7	P/P	50 - 150
Endrin	76.6	83.1	P/P	50 - 150
Endrin Aldehyde	58.8	63.7	P/P	50 - 150
Endrin Ketone	69.2	79.8	P/P	50 - 150
Esfenvalerate	44.1	42.0	F/F	50 - 180
Ethalfuralin	76.3	79.6	P/P	50 - 150
Fenpropathrin	46.4	45.7	F/F	50 - 150
Gamma-BHC	65.0	69.2	P/P	50 - 150
Gamma-Chlordane	67.2	71.5	P/P	50 - 150
Heptachlor	98.4	104	P/P	50 - 150
Heptachlor Epoxide	71.8	72.1	P/P	50 - 150
Hexachlorobenzene	56.8	59.5	P/P	50 - 150
Kepone	71.6	71.3	P/P	30 - 180
Lambda-Cyhalothrin	46.9	47.2	F/F	50 - 200
Methoxychlor	91.9	96.6	P/P	50 - 150
MGK-264	40.2	35.4	P/P	30 - 150
Mirex	127	140	P/P	50 - 180
Permethrin	55.8	54.4	P/P	50 - 150
Phenothrin	22.6	22.7	P/P	20 - 150
Piperonyl Butoxide	47.8	39.0	F/F	50 - 150
Prallethrin	25.9	22.3	F/F	30 - 150
Tau-Fluvalinate	28.6	26.3	F/F	40 - 150
Tetramethrin	28.4	24.2	F/F	30 - 150
Trans-Nonachlor	61.1	59.6	P/P	50 - 150
Triclosan Methyl	64.9	63.6	P/P	50 - 150
Trifluralin	76.4	74.8	P/P	50 - 150

Reference Method: EPA 8276
Batch ID: P398688

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlordane	93.5	83.1	P/P	56 - 117
Toxaphene	94.9	90.2	P/P	45 - 116

Reference Method: EPA 8321B
Batch ID: P398627

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	69.2		P	40 - 150
AMPA	102		P	40 - 150
Endothall	109		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P398627

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Glufosinate	97.6		P	40 - 150
Glyphosate	99.7		P	40 - 140
Sucralose	123		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P398662

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	108		P	40 - 150
2,4,5-T	125		P	40 - 150
Acetaminophen	95.5		P	30 - 150
Acetamiprid	89.1		P	40 - 150
Afidopyropen	65.4		P	40 - 150
Bentazon	109		P	30 - 150
Benzovindiflupyr	95.4		P	40 - 150
Carbamazepine	88.9		P	40 - 150
Clothianidin	99.7		P	40 - 150
Dinotefuran	96.5		P	40 - 150
Diuron	81.6		P	40 - 150
Fenuron	124		P	40 - 150
Fluridone	94.5		P	40 - 150
Hydrocodone	87.3		P	40 - 150
Ibuprofen	74.8		P	40 - 150
Imazapyr	102		P	40 - 150
Imidacloprid	95.0		P	40 - 150
Linuron	80.3		P	40 - 150
Mandestrobin	92.6		P	40 - 150
MCPP	142		P	40 - 150
Naproxen	75.9		P	40 - 150
Primidone	107		P	40 - 150
Pyraclostrobin	85.8		P	40 - 150
Thiamethoxam	91.5		P	40 - 150
Tolfenpyrad	43.5		P	40 - 150
Triclopyr	126		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P398621

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.8		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P398904

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.6		P	94 - 106

Reference Method: SM 4500 F-C-2011
Batch ID: P398906

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.8		P	93 - 104

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2011
Batch ID: P398925

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399193

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249229	Chloride	98.6		P	90 - 110
2249553	Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399195

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249229	Sulfate	98.6		P	90 - 110
2249553	Sulfate	99.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399061

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248184	Ammonia-N	98.4	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2251234	Kjeldahl Nitrogen	97.9	97.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398655

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249124	NO2NO3-N	101	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249138	Total-P	104	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398701

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249141	O-Phosphate-P	96.1	97.1	P/P	90 - 110

Reference Method: EPA 8270E
Batch ID: P398688

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249029	Aldrin	35.9	37.3	P/P	20 - 170
2249029	Alpha-BHC	82.9	83.0	P/P	50 - 170
2249029	Alpha-Chlordane	68.1	66.2	P/P	50 - 170
2249029	Beta-BHC	98.4	92.7	P/P	50 - 170
2249029	Beta-Cyfluthrin	77.0	70.9	P/P	50 - 170
2249029	Bifenthrin	66.0	64.7	P/P	40 - 170
2249029	Carbophenothion	33.0	30.9	P/P	20 - 170
2249029	Chlorothalonil	117	105	P/P	20 - 170

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270E

Batch ID: P398688

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249029	Cis-Nonachlor	64.7	66.4	P/P	50 - 170
2249029	Cypermethrin	55.6	58.7	P/P	50 - 170
2249029	Dacthal	68.8	67.8	P/P	50 - 170
2249029	DDD-p,p'	55.5	54.4	P/P	50 - 170
2249029	DDE-p,p'	63.5	61.7	P/P	50 - 170
2249029	DDT-p,p'	76.9	77.3	P/P	50 - 170
2249029	Delta-BHC	108	102	P/P	50 - 170
2249029	Deltamethrin	72.0	61.3	P/P	50 - 170
2249029	Dichlobenil	53.7	57.1	P/P	40 - 170
2249029	Dicofol	78.2	76.8	P/P	50 - 170
2249029	Dieldrin	56.0	55.3	P/P	50 - 170
2249029	Endosulfan I	71.9	71.5	P/P	50 - 170
2249029	Endosulfan II	89.1	89.2	P/P	50 - 170
2249029	Endosulfan Sulfate	64.9	61.2	P/P	50 - 170
2249029	Endrin	71.5	72.3	P/P	50 - 170
2249029	Endrin Aldehyde	64.6	61.5	P/P	50 - 170
2249029	Endrin Ketone	75.7	75.0	P/P	50 - 170
2249029	Esfenvalerate	74.2	66.4	P/P	50 - 180
2249029	Ethalfuralin	74.5	76.9	P/P	50 - 170
2249029	Fenpropathrin	59.6	54.8	P/P	50 - 170
2249029	Gamma-BHC	62.9	61.1	P/P	50 - 170
2249029	Gamma-Chlordane	67.8	66.0	P/P	50 - 170
2249029	Heptachlor	92.2	94.3	P/P	50 - 170
2249029	Heptachlor Epoxide	65.7	65.4	P/P	50 - 170
2249029	Hexachlorobenzene	69.8	69.3	P/P	50 - 170
2249029	Kepone	79.1	64.8	P/P	30 - 180
2249029	Lambda-Cyhalothrin	88.4	80.4	P/P	50 - 200
2249029	Methoxychlor	97.7	95.5	P/P	50 - 170
2249029	MGK-264	40.6	39.4	P/P	30 - 170
2249029	Mirex	129	128	P/P	50 - 180
2249029	Permethrin	109	106	P/P	50 - 170
2249029	Phenothrin	30.1	26.7	P/P	20 - 170
2249029	Piperonyl Butoxide	54.6	51.3	P/P	50 - 170
2249029	Prallethrin	40.3	44.6	P/P	30 - 170
2249029	Tau-Fluvalinate	46.0	41.9	P/P	40 - 170
2249029	Tetramethrin	47.5	38.8	P/P	30 - 170
2249029	Trans-Nonachlor	60.6	57.3	P/P	50 - 170
2249029	Triclosan Methyl	59.6	59.6	P/P	50 - 170
2249029	Trifluralin	71.2	71.9	P/P	50 - 170

Reference Method: EPA 8276

Batch ID: P398688

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249597	Chlordane	74.6	71.0	P/P	47 - 128
2249597	Toxaphene	79.7	76.1	P/P	11 - 163

Reference Method: EPA 8321B

Batch ID: P398627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248597	Acesulfame K	82.6	89.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P398627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248597	AMPA	124	131	P/P	40 - 150
2248597	Endothall	88.4	96.4	P/P	40 - 150
2248597	Glufosinate	99.1	106	P/P	40 - 150
2248597	Glyphosate	90.4	96.5	P/P	40 - 140
2248597	Sucralose	126	132	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P398662

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2248252	2,4-D	139	129	P/P	40 - 150
2248252	2,4,5-T	131	132	P/P	40 - 150
2248252	Acetaminophen	144	96.5	P/P	30 - 150
2248252	Acetamiprid	108	113	P/P	40 - 150
2248252	Afidopyropen	78.7	73.4	P/P	40 - 150
2248252	Bentazon	95.8	90.3	P/P	30 - 150
2248252	Benzovindiflupyr	97.8	94.0	P/P	40 - 150
2248252	Carbamazepine	91.5	84.3	P/P	40 - 150
2248252	Clothianidin	104	98.9	P/P	40 - 150
2248252	Dinotefuran	123	117	P/P	40 - 150
2248252	Diuron	63.7	67.7	P/P	40 - 150
2248252	Fenuron	116	117	P/P	40 - 150
2248252	Fluridone	99.4	90.0	P/P	40 - 150
2248252	Hydrocodone	97.9	95.4	P/P	40 - 150
2248252	Ibuprofen	76.4	60.4	P/P	40 - 150
2248252	Imazapyr	122	116	P/P	40 - 150
2248252	Imidacloprid	146	142	P/P	40 - 150
2248252	Linuron	70.6	68.5	P/P	40 - 150
2248252	Mandestrobin	89.4	87.8	P/P	40 - 150
2248252	MCP	144	146	P/P	40 - 150
2248252	Naproxen	75.3	86.7	P/P	40 - 150
2248252	Primidone	101	108	P/P	40 - 150
2248252	Pyraclostrobin	83.7	70.4	P/P	40 - 150
2248252	Thiamethoxam	117	112	P/P	40 - 150
2248252	Tolfenpyrad	49.1	51.7	P/P	40 - 150
2248252	Triclopyr	120	140	P/P	40 - 150

Reference Method: SM 4500 F-C-2011
Batch ID: P398906

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249042	Fluoride	98.6	97.4	P/P	92 - 107

Reference Method: SM 5310 B-2011
Batch ID: P398925

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2249292	Organic Carbon	94.2	93.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P398601

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249095	Turbidity	4.69	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399193

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249229	Chloride	0.883	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P399195

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249229	Sulfate	0.856	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P399061

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248184	Ammonia-N	1.12	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P399150

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2251234	Kjeldahl Nitrogen	0.0579	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P398655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249124	NO2NO3-N	0.496	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P398798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249138	Total-P	0.0416	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P398701

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249141	O-Phosphate-P	0.935	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8270E

Batch ID: P398688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249029	Aldrin	3.74	Spike	P	0 - 30
2249029	Alpha-BHC	0.131	Spike	P	0 - 30
2249029	Alpha-Chlordane	2.90	Spike	P	0 - 30
2249029	Beta-BHC	6.05	Spike	P	0 - 30
2249029	Beta-Cyfluthrin	8.22	Spike	P	0 - 30
2249029	Bifenthrin	2.07	Spike	P	0 - 30
2249029	Carbophenothion	6.55	Spike	P	0 - 30
2249029	Chlorothalonil	10.7	Spike	P	0 - 50
2249029	Cis-Nonachlor	2.48	Spike	P	0 - 30
2249029	Cypermethrin	5.38	Spike	P	0 - 30
2249029	Dacthal	1.45	Spike	P	0 - 30
2249029	DDD-p,p'	2.07	Spike	P	0 - 30
2249029	DDE-p,p'	2.88	Spike	P	0 - 30
2249029	DDT-p,p'	0.562	Spike	P	0 - 30
2249029	Delta-BHC	5.23	Spike	P	0 - 30
2249029	Deltamethrin	16.1	Spike	P	0 - 30
2249029	Dichlobenil	6.10	Spike	P	0 - 30
2249029	Dicofol	1.83	Spike	P	0 - 30
2249029	Dieldrin	1.21	Spike	P	0 - 30
2249029	Endosulfan I	0.521	Spike	P	0 - 30
2249029	Endosulfan II	0.168	Spike	P	0 - 30
2249029	Endosulfan Sulfate	5.95	Spike	P	0 - 30
2249029	Endrin	1.24	Spike	P	0 - 30
2249029	Endrin Aldehyde	4.94	Spike	P	0 - 30
2249029	Endrin Ketone	0.853	Spike	P	0 - 30
2249029	Esfenvalerate	11.1	Spike	P	0 - 30
2249029	Ethalfuralin	3.13	Spike	P	0 - 30
2249029	Fenpropathrin	8.46	Spike	P	0 - 30
2249029	Gamma-BHC	2.90	Spike	P	0 - 30
2249029	Gamma-Chlordane	2.70	Spike	P	0 - 30
2249029	Heptachlor	2.26	Spike	P	0 - 30
2249029	Heptachlor Epoxide	0.404	Spike	P	0 - 30
2249029	Hexachlorobenzene	0.718	Spike	P	0 - 30
2249029	Kepone	19.8	Spike	P	0 - 30
2249029	Lambda-Cyhalothrin	9.44	Spike	P	0 - 30
2249029	Methoxychlor	2.32	Spike	P	0 - 30
2249029	MGK-264	2.90	Spike	P	0 - 30
2249029	Mirex	0.739	Spike	P	0 - 30
2249029	Permethrin	2.62	Spike	P	0 - 30
2249029	Phenothrin	12.2	Spike	P	0 - 30
2249029	Piperonyl Butoxide	6.27	Spike	P	0 - 30
2249029	Prallethrin	10.1	Spike	P	0 - 30
2249029	Tau-Fluvalinate	9.38	Spike	P	0 - 30
2249029	Tetramethrin	20.0	Spike	P	0 - 30
2249029	Trans-Nonachlor	5.58	Spike	P	0 - 30
2249029	Triclosan Methyl	0.0252	Spike	P	0 - 30
2249029	Trifluralin	0.942	Spike	P	0 - 30
LFB	Aldrin	8.64	LCS	P	0 - 30
LFB	Alpha-BHC	2.24	LCS	P	0 - 30
LFB	Alpha-Chlordane	5.48	LCS	P	0 - 30
LFB	Beta-BHC	9.80	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270E
Batch ID: P398688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Beta-Cyfluthrin	0.865	LCS	P	0 - 30
LFB	Bifenthrin	5.86	LCS	P	0 - 30
LFB	Carbophenothion	8.51	LCS	P	0 - 30
LFB	Chlorothalonil	17.5	LCS	P	0 - 50
LFB	Cis-Nonachlor	8.78	LCS	P	0 - 30
LFB	Cypermethrin	5.89	LCS	P	0 - 30
LFB	Dacthal	1.77	LCS	P	0 - 30
LFB	DDD-p,p'	1.03	LCS	P	0 - 30
LFB	DDE-p,p'	1.62	LCS	P	0 - 30
LFB	DDT-p,p'	1.67	LCS	P	0 - 30
LFB	Delta-BHC	9.29	LCS	P	0 - 30
LFB	Deltamethrin	12.0	LCS	P	0 - 30
LFB	Dichlobenil	11.2	LCS	P	0 - 30
LFB	Dicofol	7.41	LCS	P	0 - 30
LFB	Dieldrin	4.18	LCS	P	0 - 30
LFB	Endosulfan I	5.59	LCS	P	0 - 30
LFB	Endosulfan II	12.4	LCS	P	0 - 30
LFB	Endosulfan Sulfate	6.21	LCS	P	0 - 30
LFB	Endrin	8.24	LCS	P	0 - 30
LFB	Endrin Aldehyde	8.14	LCS	P	0 - 30
LFB	Endrin Ketone	14.1	LCS	P	0 - 30
LFB	Esfenvalerate	5.03	LCS	P	0 - 30
LFB	Ethalfuralin	4.20	LCS	P	0 - 30
LFB	Fenpropathrin	1.48	LCS	P	0 - 30
LFB	Gamma-BHC	6.35	LCS	P	0 - 30
LFB	Gamma-Chlordane	6.29	LCS	P	0 - 30
LFB	Heptachlor	5.26	LCS	P	0 - 30
LFB	Heptachlor Epoxide	0.371	LCS	P	0 - 30
LFB	Hexachlorobenzene	4.53	LCS	P	0 - 30
LFB	Kepone	0.406	LCS	P	0 - 30
LFB	Lambda-Cyhalothrin	0.751	LCS	P	0 - 30
LFB	Methoxychlor	5.02	LCS	P	0 - 30
LFB	MGK-264	12.8	LCS	P	0 - 30
LFB	Mirex	9.78	LCS	P	0 - 30
LFB	Permethrin	2.57	LCS	P	0 - 30
LFB	Phenothrin	0.335	LCS	P	0 - 30
LFB	Piperonyl Butoxide	20.3	LCS	P	0 - 30
LFB	Prallethrin	14.6	LCS	P	0 - 30
LFB	Tau-Fluvalinate	8.54	LCS	P	0 - 30
LFB	Tetramethrin	15.9	LCS	P	0 - 30
LFB	Trans-Nonachlor	2.54	LCS	P	0 - 30
LFB	Triclosan Methyl	2.02	LCS	P	0 - 30
LFB	Trifluralin	2.09	LCS	P	0 - 30

Reference Method: EPA 8276
Batch ID: P398688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249597	Chlordane	13.7	Spike	P	0 - 30
2249597	Toxaphene	13.3	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8276
Batch ID: P398688

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Chlordane	11.8	LCS	P	0 - 30
LFB	Toxaphene	5.07	LCS	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P398627

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248597	Acesulfame K	8.17	Spike	P	0 - 30
2248597	AMPA	5.33	Spike	P	0 - 30
2248597	Endothall	8.70	Spike	P	0 - 30
2248597	Glufosinate	6.42	Spike	P	0 - 30
2248597	Glyphosate	6.44	Spike	P	0 - 30
2248597	Sucralose	4.40	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P398662

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2248252	2,4-D	7.81	Spike	P	0 - 30
2248252	2,4,5-T	0.896	Spike	P	0 - 30
2248252	Acetaminophen	39.5	Spike	F	0 - 30
2248252	Acetamiprid	4.29	Spike	P	0 - 30
2248252	Afidopyropen	6.96	Spike	P	0 - 30
2248252	Bentazon	5.90	Spike	P	0 - 30
2248252	Benzovindiflupyr	3.94	Spike	P	0 - 30
2248252	Carbamazepine	8.22	Spike	P	0 - 30
2248252	Clothianidin	3.88	Spike	P	0 - 30
2248252	Dinotefuran	4.38	Spike	P	0 - 30
2248252	Diuron	6.23	Spike	P	0 - 30
2248252	Fenuron	0.443	Spike	P	0 - 30
2248252	Fluridone	9.93	Spike	P	0 - 30
2248252	Hydrocodone	2.63	Spike	P	0 - 30
2248252	Ibuprofen	23.4	Spike	P	0 - 30
2248252	Imazapyr	5.62	Spike	P	0 - 30
2248252	Imidacloprid	2.61	Spike	P	0 - 30
2248252	Linuron	3.01	Spike	P	0 - 30
2248252	Mandestrobin	1.84	Spike	P	0 - 30
2248252	MCPP	1.52	Spike	P	0 - 30
2248252	Naproxen	14.0	Spike	P	0 - 30
2248252	Primidone	7.10	Spike	P	0 - 30
2248252	Pyraclostrobin	17.3	Spike	P	0 - 30
2248252	Thiamethoxam	4.81	Spike	P	0 - 30
2248252	Tolfenpyrad	5.22	Spike	P	0 - 30
2248252	Triclopyr	15.7	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: SM 2120 B-2011
Batch ID: P398621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249096	Color (true)	7.48	Sample	P	0 - 20

Reference Method: SM 2320 B-2011
Batch ID: P398904

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249042	Total Alkalinity	1.13	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011
Batch ID: P399052

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249291	TDS	5.78	Sample	P	0 - 10

Reference Method: SM 2540 D-2011
Batch ID: P398842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249291	TSS	3.51	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011
Batch ID: P398906

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249042	Fluoride	0.921	Spike	P	0 - 2.1

Reference Method: SM 5310 B-2011
Batch ID: P398925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2249292	Organic Carbon	0.502	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Surrogates

Lab Sample ID: 2249274
Field Sample ID: G1SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270E	Decachlorobiphenyl	42.2	P	35 - 120
EPA 8270E	Tetrachloro-m-xylene	41.1	P	30 - 110
EPA 8276	Decachlorobiphenyl	53.0	P	29 - 92.0
EPA 8276	PCNB	63.1	P	43 - 134

Lab Sample ID: 2249284
Field Sample ID: G1SE0011

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	123	P	30 - 160
EPA 8321B	Acetaminophen-d4	77.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	59.3	P	30 - 160
EPA 8321B	Diuron-d6	39.4	P	30 - 160
EPA 8321B	Endothall-d6	77.4	P	30 - 160
EPA 8321B	Endothall-d6	77.4	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	40 - 160
EPA 8321B	Glyphosate 13C 15N	103	P	40 - 160
EPA 8321B	Ibuprofen-d3	56.3	P	30 - 160
EPA 8321B	Primidone-d5	75.7	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160
EPA 8321B	Sucralose-d6	106	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A105598

Included Lab Sample IDs: 2249268

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A105603

Included Lab Sample IDs: 2249268

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.5	99.8	P/P	90 - 115

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A105611

Included Lab Sample IDs: 2249269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A105616

Included Lab Sample IDs: 2249284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	66.7	64.2	P/P	60 - 160
Endothall	105	102	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A105625

Included Lab Sample IDs: 2249284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	119	116	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A105627

Included Lab Sample IDs: 2249284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	103	107	P/P	60 - 160
Glufosinate	102	105	P/P	60 - 160
Glyphosate	91.0	102	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A105633

Included Lab Sample IDs: 2249270

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.4	99.5	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011
 Run ID: A105721
 Included Lab Sample IDs: 2249268

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.2	102	P/P	90 - 110

Reference Method: SM 4500 F-C-2011
 Run ID: A105721
 Included Lab Sample IDs: 2249268

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	102	P/P	90 - 110

Reference Method: SM 5310 B-2011
 Run ID: A105730
 Included Lab Sample IDs: 2249269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	98.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Run ID: A105734
 Included Lab Sample IDs: 2249269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	106	P/P	90 - 110

Reference Method: EPA 8321B
 Run ID: A105752
 Included Lab Sample IDs: 2249284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	93.3	91.1	P/P	50 - 150
2,4,5-T	88.4	61.9	P/P	50 - 150
Acetaminophen	91.3	87.8	P/P	60 - 160
Acetamiprid	96.6	99.6	P/P	50 - 150
Afidopyropen	79.5	61.5	P/P	50 - 150
Bentazon	119	105	P/P	50 - 160
Benzovindiflupyr	87.2	65.9	P/P	50 - 150
Carbamazepine	86.5	85.0	P/P	60 - 150
Clothianidin	98.3	91.6	P/P	60 - 150
Dinotefuran	100	98.6	P/P	50 - 150
Diuron	87.5	80.7	P/P	60 - 160
Fenuron	103	102	P/P	60 - 150
Fluridone	87.4	66.0	P/P	60 - 160
Hydrocodone	103	98.2	P/P	60 - 150
Ibuprofen	99.2	65.6	P/P	50 - 160
Imazapyr	100	108	P/P	50 - 150
Imidacloprid	92.5	88.2	P/P	60 - 150
Linuron	82.7	64.3	P/P	60 - 150
Mandestrobin	89.5	60.5	P/P	50 - 150
MCPP	89.2	61.0	P/P	50 - 150
Naproxen	93.2	76.3	P/P	50 - 160
Primidone	98.7	95.5	P/P	60 - 150
Pyraclostrobin	85.4	61.2	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A105752
Included Lab Sample IDs: 2249284

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Thiamethoxam	95.3	91.8	P/P	50 - 150
Tolfenpyrad	82.7	65.3	P/P	60 - 150
Triclopyr	91.8	71.3	P/P	50 - 150

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A105796
Included Lab Sample IDs: 2249269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.4	98.8	P/P	90 - 110

Reference Method: EPA 8270E
Run ID: A105805
Included Lab Sample IDs: 2249274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aldrin	96.6		P	80 - 120
Alpha-BHC	101		P	80 - 120
Alpha-Chlordane	96.8		P	80 - 120
Beta-BHC	93.1		P	80 - 120
Beta-Cyfluthrin	100		P	80 - 120
Bifenthrin	104		P	80 - 120
Carbophenothion	101		P	80 - 120
Chlorothalonil	108		P	80 - 120
Cis-Nonachlor	101		P	80 - 120
Cypermethrin	113		P	80 - 120
Dacthal	98.3		P	80 - 120
DDD-p,p'	99.1		P	80 - 120
DDE-p,p'	94.6		P	80 - 120
DDT-p,p'	99.8		P	80 - 120
Delta-BHC	100		P	80 - 120
Deltamethrin	104		P	80 - 120
Dichlobenil	90.6		P	80 - 120
Dicofol	102		P	80 - 120
Dieldrin	93.6		P	80 - 120
Endosulfan I	99.8		P	80 - 120
Endosulfan II	104		P	80 - 120
Endosulfan Sulfate	97.8		P	80 - 120
Endrin	105		P	80 - 120
Endrin Aldehyde	98.9		P	80 - 120
Endrin Ketone	93.9		P	80 - 120
Esfenvalerate	96.3		P	80 - 120
Ethalfuralin	98.1		P	80 - 120
Fenpropathrin	102		P	80 - 120
Gamma-BHC	101		P	80 - 120
Gamma-Chlordane	97.0		P	80 - 120
Heptachlor	101		P	80 - 120
Heptachlor Epoxide	96.9		P	80 - 120
Hexachlorobenzene	95.6		P	80 - 120
Kepone	87.4		P	80 - 120
Lambda-Cyhalothrin	101		P	80 - 120

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270E
Run ID: A105805
Included Lab Sample IDs: 2249274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Methoxychlor	98.2		P	80 - 120
MGK-264	94.3		P	80 - 120
Mirex	102		P	80 - 120
Permethrin	99.9		P	80 - 120
Phenothrin	110		P	80 - 120
Piperonyl Butoxide	99.3		P	80 - 120
Prallethrin	91.7		P	80 - 120
Tau-Fluvalinate	102		P	80 - 120
Tetramethrin	104		P	80 - 120
Trans-Nonachlor	93.2		P	80 - 120
Triclosan Methyl	97.0		P	80 - 120
Trifluralin	99.2		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A105834
Included Lab Sample IDs: 2249268

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	101	101	P/P	90 - 110
Sulfate	101	100	P/P	90 - 110

Reference Method: EPA 8276
Run ID: A105852
Included Lab Sample IDs: 2249274

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chlordane	99.8		P	80 - 120
Toxaphene	105		P	80 - 120

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A105875
Included Lab Sample IDs: 2249269

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	91.6	95.2	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.
Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		LCS	Precision	MS
							SMP	
EPA 180.1 Rev. 2.0	Turbidity						4.69	
EPA 300.0 Rev. 2.1	Chloride	100		98.6	98.8		0.883	
	Sulfate	99.5		98.6	99.5		0.856	
EPA 350.1 Rev. 2.0	Ammonia-N	96.8		98.4	99.6			1.12
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	103		97.9	97.9			0.0579
EPA 353.2 Rev. 2.0	NO ₂ NO ₃ -N	102		101	100			0.496
EPA 365.1 Rev. 2.0	Total-P	104		104	104			0.0416
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.8		96.1	97.1			0.935
EPA 8270E	Aldrin	39.2	42.8	37.3	35.9	8.64		3.74
	Alpha-BHC	88.2	90.2	83.0	82.9	2.24		0.131
	Alpha-Chlordane	70.0	74.0	68.1	66.2	5.48		2.90
	Beta-BHC	32.7	36.0	98.4	92.7	9.80		6.05
	Beta-Cyfluthrin	51.0	50.5	77.0	70.9	0.865		8.22
	Bifenthrin	49.9	47.0	66.0	64.7	5.86		2.07
	Carbophenothion	17.7	16.2	33.0	30.9	8.51		6.55
	Chlorothalonil	109	130	117	105	17.5		10.7
	Cis-Nonachlor	65.1	71.1	64.7	66.4	8.78		2.48
	Cypermethrin	42.9	40.4	58.7	55.6	5.89		5.38
	Dacthal	73.1	71.8	67.8	68.8	1.77		1.45
	DDD-p,p'	58.1	58.7	54.4	55.5	1.03		2.07
	DDE-p,p'	65.2	64.2	61.7	63.5	1.62		2.88
	DDT-p,p'	80.7	82.1	77.3	76.9	1.67		0.562
	Delta-BHC	48.9	53.6	108	102	9.29		5.23
	Deltamethrin	40.9	36.3	61.3	72.0	12.0		16.1
	Dichlobenil	30.6	34.2	53.7	57.1	11.2		6.10
	Dicofol	49.1	45.6	78.2	76.8	7.41		1.83
	Dieldrin	62.8	65.5	55.3	56.0	4.18		1.21
	Endosulfan I	76.6	81.0	71.5	71.9	5.59		0.521
	Endosulfan II	95.2	108	89.2	89.1	12.4		0.168
	Endosulfan Sulfate	61.4	57.7	61.2	64.9	6.21		5.95
	Endrin	76.6	83.1	71.5	72.3	8.24		1.24
	Endrin Aldehyde	58.8	63.7	64.6	61.5	8.14		4.94
	Endrin Ketone	69.2	79.8	75.7	75.0	14.1		0.853
	Esfenvalerate	44.1	42.0	74.2	66.4	5.03		11.1
	Ethalfuralin	76.3	79.6	74.5	76.9	4.20		3.13
	Fenpropathrin	46.4	45.7	59.6	54.8	1.48		8.46
	Gamma-BHC	65.0	69.2	62.9	61.1	6.35		2.90
	Gamma-Chlordane	67.2	71.5	67.8	66.0	6.29		2.70
	Heptachlor	98.4	104	92.2	94.3	5.26		2.26
	Heptachlor Epoxide	71.8	72.1	65.7	65.4	0.371		0.404
	Hexachlorobenzene	56.8	59.5	69.8	69.3	4.53		0.718
	Kepone	71.6	71.3	79.1	64.8	0.406		19.8
	Lambda-Cyhalothrin	46.9	47.2	88.4	80.4	0.751		9.44
	Methoxychlor	91.9	96.6	97.7	95.5	5.02		2.32
	MGK-264	40.2	35.4	40.6	39.4	12.8		2.90
	Mirex	127	140	129	128	9.78		0.739
	Permethrin	55.8	54.4	109	106	2.57		2.62
	Phenothrin	22.6	22.7	30.1	26.7	0.335		12.2
	Piperonyl Butoxide	47.8	39.0	54.6	51.3	20.3		6.27
	Prallethrin	25.9	22.3	40.3	44.6	14.6		10.1
	Tau-Fluvalinate	28.6	26.3	46.0	41.9	8.54		9.38
	Tetramethrin	28.4	24.2	47.5	38.8	15.9		20.0
	Trans-Nonachlor	61.1	59.6	60.6	57.3	2.54		5.58
	Triclosan Methyl	64.9	63.6	59.6	59.6	2.02		0.0252

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8270E	Trifluralin	76.4	74.8	71.2	71.9	2.09	0.942
EPA 8276	Chlordane	93.5	83.1	74.6	71.0	11.8	13.7
	Toxaphene	94.9	90.2	79.7	76.1	5.07	13.3
	2,4-D	108		139	129		7.81
EPA 8321B	2,4,5-T	125		131	132		0.896
	Acesulfame K	69.2		82.6	89.6		8.17
	Acetaminophen	95.5		144	96.5		39.5
	Acetamiprid	89.1		108	113		4.29
	Afidopyropen	65.4		78.7	73.4		6.96
	AMPA	102		124	131		5.33
	Bentazon	109		95.8	90.3		5.90
	Benzovindiflupyr	95.4		97.8	94.0		3.94
	Carbamazepine	88.9		91.5	84.3		8.22
	Clothianidin	99.7		104	98.9		3.88
	Dinotefuran	96.5		123	117		4.38
	Diuron	81.6		63.7	67.7		6.23
	Endothall	109		88.4	96.4		8.70
	Fenuron	124		116	117		0.443
	Fluridone	94.5		99.4	90.0		9.93
	Glufosinate	97.6		99.1	106		6.42
	Glyphosate	99.7		90.4	96.5		6.44
	Hydrocodone	87.3		97.9	95.4		2.63
	Ibuprofen	74.8		76.4	60.4		23.4
	Imazapyr	102		122	116		5.62
	Imidacloprid	95.0		146	142		2.61
	Linuron	80.3		70.6	68.5		3.01
	Mandestrobin	92.6		89.4	87.8		1.84
	MCPP	142		144	146		1.52
	Naproxen	75.9		75.3	86.7		14.0
	Primidone	107		101	108		7.10
	Pyraclostrobin	85.8		83.7	70.4		17.3
	Sucralose	123		126	132		4.40
	Thiamethoxam	91.5		117	112		4.81
	Tolfenpyrad	43.5		49.1	51.7		5.22
	Triclopyr	126		120	140		15.7
SM 2120 B-2011	Color (true)	98.8				7.48	
SM 2320 B-2011	Total Alkalinity	99.6				1.13	
SM 2540 C-2011	TDS					5.78	
SM 2540 D-2011	TSS					3.51	
SM 4500 F-C-2011	Fluoride	99.8		98.6	97.4		0.921
SM 5310 B-2011	Organic Carbon	97.6		94.2	93.5		0.502

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2249268
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2249268
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2249268
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2249269
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2249269
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2249269
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2249269

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2249270
EPA 8270E	Organochlorine pesticides, pyrethroids and tracers in water matrices by GC/MS/MS	2249274
EPA 8276	Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization	2249274
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2249284
EPA 8321B	Water soluble organic compounds by HPLC/MS/MS	2249284
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2249268
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2249268
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2249268
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2249268
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2249268
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2249269

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	05/21/2021			05/21/2021 14:32	Sarah A Nixon	2249268
EPA 300.0 Rev. 2.1	05/21/2021			06/03/2021 15:39	Lipi Saha	2249268
EPA 350.1 Rev. 2.0	05/21/2021			06/01/2021 15:24	Roberta Tatti	2249269
EPA 351.2 Rev. 2.0	05/21/2021	06/03/2021 13:01	Benjamin T. Nordmann	06/04/2021 11:24	Virginia P. Brown	2249269
EPA 353.2 Rev. 2.0	05/21/2021			05/24/2021 11:17	Beverly Y. Sanders	2249269
EPA 365.1 Rev. 2.0	05/21/2021	05/26/2021 13:31	Yen Ta	05/27/2021 13:27	Shengyu Ding	2249269
EPA 365.1 Rev. 2.0 dissolved	05/21/2021			05/21/2021 14:51	Blanca Fach	2249270
EPA 8270E	05/21/2021	05/25/2021 08:30	Rasheda Ghaffari	06/01/2021 00:12	Arthur Maknenko	2249274
EPA 8276	05/21/2021	05/25/2021 08:30	Rasheda Ghaffari	05/29/2021 06:57	Julie Wi	2249274
EPA 8321B	05/21/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 13:20	Pramila Ghimire	2249284
	05/21/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 14:06	Juyoung Kim	2249284
	05/21/2021	05/24/2021 08:30	Pramila Ghimire	05/24/2021 21:14	Pramila Ghimire	2249284
	05/21/2021	05/24/2021 08:30	Pramila Ghimire	05/25/2021 08:47	Juyoung Kim	2249284
	05/21/2021	05/25/2021 09:00	Hoor Shaik	05/27/2021 15:53	Juyoung Kim	2249284
SM 2120 B-2011	05/21/2021			05/21/2021 16:29	Madeline Gruver	2249268
SM 2320 B-2011	05/21/2021			05/26/2021 22:57	Dale L. Simmons	2249268
SM 2540 C-2011	05/21/2021			05/25/2021 15:06	Yijie Li	2249268
SM 2540 D-2011	05/21/2021			05/25/2021 15:06	Yijie Li	2249268
SM 4500 F-C-2011	05/21/2021			05/26/2021 22:57	Dale L. Simmons	2249268
SM 5310 B-2011	05/21/2021			05/27/2021 01:02	Madeline Gruver	2249269